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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,891

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Varadarajan Srinivasan

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WILLIAM L. PARADICE, III
4880 STEVENS CREEK BOULEVARD
SUITE 201
SAN JOSE, CA 95129

EXAMINER

LEE, BETTY E

ART UNIT

PAPER NUMBER

2619

MAIL DATE

DELIVERY MODE

01/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/613,891

Applicant(s)

SRINIVASAN ET AL.

Examiner

Betty Lee

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6,9-11,21 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,9-11,21 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims **1, 2, 4, 10, 11, 21, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Onvural et al. (US 2002/0150115) in view of Amou et al. (US 6,895,012) and Lynn et al. (*The Priority Token Bank in a Network of Queues*).

Regarding claims 1 and 21, Onvural teaches a departure time calculator for generating a departure time for each packet (see paragraph 27 lines 1-4); a table having a plurality of rows, each for storing the departure time for a corresponding packet (see paragraph 24 lines 12-16); and compare logic having a plurality of outputs coupled to corresponding inputs of the token generator (see paragraph 24 lines 16-17; The token/index is used to locate the data in the memory.); a token generator for generating a token for each packet (see paragraph 24 lines 16-17), where each token is generated in response to a next free address in the table (see paragraph 38 lines 1-3; Since the index/token can be implemented as a linked list, the index pointer indicates the free addresses in the table by showing which slots contain a packet.); and a packet memory for storing a payload for each packet at an address indicated by the packet's token/index (see paragraph 24 lines 16-17). Onvural teaches all the subject matter of the claimed invention with the exception of a departure time prioritizer for comparing the departure times with each other to determine which of the departure times is the earliest and the token generator comprising a priority encoder.

However, Amou teaches a departure time prioritizer (see Fig. 2 Box 3) for comparing the departure times with each other to determine which of the departure times is the earliest (see col. 4 lines 61-64). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Amou in the system of Onvural. The

motivation for doing so is to make the system more efficient. Onvural in view of Amou teaches all the subject matter of the claimed invention with the exception of the token generator comprising a priority encoder.

However, Lynn teaches the token generator comprising a priority encoder (see Section 3, pg. 1388 paragraph 4 lines 1-4). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Lynn in the system of Onvural in view of Amou. The motivation for using the priority token bank as taught by Lynn in the system of Onvural in view of Amou is that that priority token bank would be able to guarantee a certain quality of service.

Regarding claim 2, Onvural further teaches the departure time calculator and the departure time prioritizer comprise a packet scheduler (see paragraph 24 lines 1-2 and paragraph 27 lines 1-4; Assigning timestamps to determine when the packets should be transmitted is scheduling the packet transmissions. The sorter schedules the packets by earliest deadline first.).

Regarding claim 4, Onvural in view of Amou teaches the departure time prioritizer comprises a programmable priority encoder (see paragraph 34 lines 10-12; The priority encoder is programmed to assign priorities based on QoS requirements.). Onvural in view of Amou teaches all the subject matter of the claimed invention with the exception of the token generator comprising a programmable priority encoder.

Lynn teaches the token generator comprising a programmable priority encoder (see Section 3, pg. 1388 paragraph 4 lines 1-4; The priority encoder is programmed to assign priorities based on QoS requirements.). Thus, it would have been obvious to

one of ordinary skill in the art to use the system of Lynn in the system of Onvural in view of Amou. The motivation for using the priority token bank as taught by Lynn in the system of Onvural in view of Amou is that that priority token bank would be able to guarantee a certain quality of service.

Regarding claim 10, Onvural further teaches each row of the table includes a valid bit indicating whether a valid departure time is stored in the row (see paragraph 38 lines 1-3).

Regarding claim 11, Onvural further teaches the tokens are generated in response to the valid bits (see paragraph 39 lines 1-9).

Regarding claim 25, Onvural further teaches asserting a signal line for the row of the table that contains the earliest departure time (see paragraph 35 lines 1-5; The sorter/compare circuit uses a pointer to determine the earliest time.); generating an index of the row having the asserted signal line (see paragraph 24 lines 16-17); and reading a packet from a location in a packet memory addressed by the index (see paragraph 24 lines 16-17).

5. Claims **6 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Amou et al. (US 6,895,012) in view of Onvural et al. (US 2002/0150115) and Lynn et al. (*The Priority Token Bank in a Network of Queues*) as applied to claim 1 above, and further in view of McAlpine (US 6,011,798).

Regarding claim 6, Onvural in view of Amou and Lynn teaches all the subject matter of the claimed invention with the exception of more than one row of the table

stores the same departure time. McAlpine teaches more than one row of the table stores the same departure time (see col. 5 lines 27-32). Thus, it would have been obvious to one of ordinary skill in the to use the system of McAlpine in the system of Onvural in view of Amou and Lynn. The motivation for using the system of McAlpine in the system of Onvural in view of Amou and Lynn is so that the system will be able to transmit more than one packet with the same scheduled time.

Regarding claim 9, Onvural in view of Amou and Lynn teaches all the subject matter of the claimed invention with the exception of the departure times can be stored in any order in the table, regardless of priority. McAlpine teaches that the departure times can be stored in any order in the table, regardless of priority (see col. 5 lines 11-15). Thus, it would have been obvious to one of ordinary skill in the art to use the system of McAlpine in the system of Onvural in view of Amou and Lynn. The motivation for using the system of McAlpine in the system of Onvural in view of Amou and Lynn is so that the packets do not have to be sorted before placing them in the table, which simplifies the process.

Response to Arguments

6. Applicant's arguments filed November 7, 2007 have been fully considered but they are not persuasive.

With respect to applicant's arguments regarding claim 1, applicant submits that:

(1) Lynn does not teach the "token generator comprising a priority encoder" and (2)

Onvural does not teach "each token comprises a next free address in the table."

Examiner respectfully disagrees.

Lynn teaches a token generator that encodes the priority of the packets in each class (see pg. 1387, Section 3, paragraph 1). Thus, Lynn does teach a priority encoder.

Onvural teaches the index/token containing information used to determine which slots/addresses in the table contain packets. Thus, Onvural does teach the index/token comprising a next free address in the table.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betty Lee whose telephone number is (571) 270-1412.

Application/Control Number:
10/613,891
Art Unit: 2619

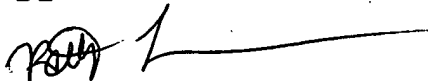
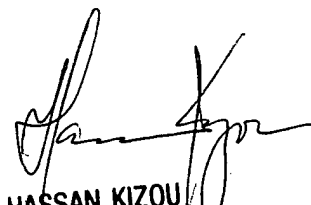
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The examiner can normally be reached on Monday-Thursday 9-5 EST and alternate Fridays:

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BL

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HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600